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UNITED STATES PATENT AND TRADEMARK OFFICE

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09/909,931	07/20/2001	Robert Olson Aberg	MWS-076RCE	2408

959 7590 01/25/2007	**EXAMINER**
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	2191	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	09/909,931	ABERG, ROBERT OLSON
	Examiner	Art Unit	
	Satish S. Rampuria	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 November 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22 and 24-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *23* is/are allowed.

6)☒ Claim(s) *1-22 and 24-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Response to Amendment

1.   This action is in response to the Amendment filed on November 6, 2006.

2.   Claims added by the Applicant: 22-30

3.   Claims allowed: 23.

4.   Claims amended by the Applicant: 1, 3, 4, and 6.

5.   Claims pending in the application: 1-22 and 24-30.

Response to Arguments

6.   Applicant's arguments filed November 6, 2006 have been fully considered but

they are not persuasive.

In the remarks, the applicant has argued that:

   a.   Kodosky, Chang, and admitted prior art do not disclose or suggest in a

   first block, performing an index search operation by receiving a first value

   indicative of an index into a look-up table and generating information indicative of

   the location of the first value relative to a predefined domain of possible indexed

   values that define regions, as required by the amended claim 1.

   b.   Kodosky, the admitted prior art and McKaskle do not disclose or suggest

   receiving as an input a block diagram model that includes interpolation lookup

   blocks which each perform interpolated table lookup, the interpolation lookup

   blocks are connected to at least one index search block which performs index

   search operations that index search block providing an input valued and

breakpoint data set to any connected interpolation lookup block, as required by

claim 17.

Examiner's response:

a.   In response to Applicant's argument, it is noted that the combination of

Kodosky, Chang, and admitted prior art does disclose or suggest the limitations

as amended in the claim 1. Rejection clearly points out where Kodosky, Chang,

and admitted prior art teach the claimed features and why it would have been

obvious to combine their teachings. Kodosky discloses modeling program

process where the system uses various types of models to generate a

graphically representation of a modeled program. The graphically displays a

procedure by which the one or more input variables can produce the one or more

output variables (see the rejection above). Chang discloses method and system

for mapping and accessing objects from conventional data store where the

method uses look up table and indexes to refer to data (see the rejection above).

Admitted prior art discloses performing an index search operation which is known

to one skills in the art as indicated in the Applicant Specification (page 4, lines 4-

5 and figures 1A-1B labeled as "Prior Art"). Applicant only makes general

allegations and does not point out any errors in the rejection. Therefore, the

rejection is proper and maintained herein.

b.   In response to Applicant's argument, it is noted that the combination of

Kodosky, admitted prior art, and McKaskle does disclose or suggest the

limitations as required by claim 17. Rejection clearly points out where Kodosky,

admitted prior art, and McKaskle teach the claimed features and why it would

have been obvious to combine their teachings. Kodosky discloses modeling

program process where the system uses various types of models to generate a

graphically representation of a modeled program. The graphically displays a

procedure by which the one or more input variables can produce the one or more

output variables (see the rejection above). Admitted prior art discloses

performing an index search operation which is known to one skills in the art as

indicated in the Applicant Specification (page 4, lines 4-5 and figures 1A-1B

labeled as "Prior Art"). McKaskle does disclose the breakpoint data set (see

FIG.34-36 and rejection above) as cited in the combination of Kodosky and

Admitted prior art. Applicant only makes general allegations and does not point

out any errors in the rejection. Therefore, the rejection is proper and maintained

herein.

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter,
or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
requirements of this title.

8.   Claims 1, 17, 19, 20, 21, 22, 24, 27, 29, and 30 are rejected under 35

U.S.C. 101 because the claimed invention is directed to non-statutory subject

matter.

Claim 1, 20, 22, 27, 29, and 30 is non-statutory because the language of the claim raises a question as to would the result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Claim recites method of block diagram modeling in a data processing system, representing functional descriptive material by determining an output value, however the output value is not being used therefore, the claims does not produce a concrete, useful, and tangible result thus amounts to only abstract idea and are nonstatutory.

Claim 19 is non-statutory because the language of the claim raises a question as to would the result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Claim recites method of graphical block diagram processing, representing functional descriptive material without producing a concrete, useful, and tangible result thus amounts to only abstract idea and are nonstatutory.

Claim 24 is non-statutory because the language of the claim raises a question as to whether the claim is directed merely to an abstract idea which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Claim recites a device comprising, representing functional descriptive material without a hardware element (i.e., a memory or a processor), program code per se are not tangibly embodied.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 1-14, 16 and 19-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent No. 4,901,221 to Kodosky et al., hereinafter called

Kodosky, in view of US Patent No. 5,627,979 to Chang et al., hereinafter called Chang

and further in view of Admitted Prior Art, hereinafter admitted prior art.

Per claims 1-5, 22, 25, 26, 27:

Kodosky disclose:

-   A method of block diagram modeling in a data processing system (col. 3, lines

    50-51 "The present invention provides a system for modelling a process" and

    col. 3, line 54 "an editor for displaying at least one diagram"), comprising:

-   in a first block, receiving a first value indicative of an index into a lookup table

    (col. 3, lines 61-63 "an execution subsystem for assigning respective values for

    the one or more input variables") and generating information indicative of the

    location of the first value relative to a predefined domain of possible indexed

    values that define regions (col. 8, lines 58-59 "graphical representations of input

    controls and output indicators are stored in a memory library" also fig. 5 and

    related description);

- in a second block, receiving the information generated by the first block (col. 13, lines 29-30 "output data are available for transmission to a next system" also fig. 18 and related description); and

- using the information received in the second block to determine an output value (col. 13, lines 49-51 "constructing a visual display in which at least one input variable produces at least output variable according to a displayed procedure") used with graphical block model, a processing engine operating with the graphical model, a compiler, a simulator, a model constructor/editor, a code generator, a display, or a device.

Kodosky does not explicitly disclose lookup table and index.

However, Chang discloses in an analogous computer system a table is provided to access the information stored in using various types of indexes, record identifiers, link fields and pointers (col. 3, lines 39-50 "data model... provides fixed-length records composed of data fields of various types, indexes, record identifiers and link fields, and pointer structures" and col. 4, lines 19-21 "A table may contain as many foreign keys as links it requires to relate it to other tables with which it has relationships").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of using lookup table and indexes as taught by Chang into the method of block diagram data processing as taught by Kodosky. The modification would be obvious because of one of ordinary skill

in the art would be motivated to use the lookup table to map or access the information

as suggested by Chang (col. 5, lines 1-10).

Neither Kodosky nor Chang explicitly disclose performing an index search operation

lookup table and index.

However, admitted prior art discloses performing an index search operation

lookup table and index (Applicant's specification, page 4, lines 4-5 "The manner in

which the blocks 12, 20 are defined and executed to perform an index search operation

and interpolated table lookup is known in the art" See FIG. 1A-1B (prior art)).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the method of performing an index

search operation lookup table and index taught in admitted prior art into the method of

block diagram data processing as taught by the combination system by Kodosky and

Chang. The modification would be obvious because of one of ordinary skill in the art

would be motivated to perform index search operation to provide search in multiple

interpolation blocks with common input as suggested by admitted prior art (Applicant's

specification, page 1, lines 23-28).

Per claims 6 and 7:

The rejection of claim 5 is incorporated, and further, Kodosky disclose:

- receiving a value indicative of an index into the lookup table and corresponding

  to a different one of N dimensions (col. 3, lines 61-63 "an execution subsystem

  for assigning respective values for the one or more input variables");

- generating information indicative of the location of such value relative to the

  predefined domain of possible index values (col. 8, lines 58-59 "graphical

  representations of input controls and output indicators are stored in a memory

  library" also fig. 5 and related description);

- in the second block, receiving the information generated by each of the N index

  search blocks (col. 13, lines 29-30 "output data are available for transmission to a

  next system" also fig. 18 and related description); and

- using the information received in the second block to determine an output value

  of the first lookup table (col. 13, lines 49-51 "constructing a visual display in

  which at least one input variable produces at least output variable according to a

  displayed procedure").

Kodosky does not explicitly disclose N index search block.

However, admitted prior art discloses N index search block (Applicant's

specification, page 1, lines 25-26 "One type of block supported by such tools is an n-

dimensional interpolation block that performs an index search operation and

interpolated table lookup").

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the method of including the N index

search block as taught in admitted prior art into the method of block diagram data

processing as taught by the combination system by Kodosky and Chang. The

modification would be obvious because of one of ordinary skill in the art would be

motivated to include N index search block to perform index search operation.

Per claims 8 and 14:

The rejection of claim 1 is incorporated, and further, neither Kodosky nor Chang

disclose maintaining in a block library a pre-lookup index search block and an

interpolation block that uses output of the pre-lookup index search block for interpolated

table lookup; and instantiating the index search block to create the first block and

instantiating the interpolation block to create the second block.

However, admitted prior art discloses maintaining in a block library a pre-lookup

index search block and an interpolation block that uses output of the pre-lookup index

search block for interpolated table lookup (Applicant's specification, page 1, lines 10-12

"Such blocks may be placed in a reference library to define a graphical class.

Graphical libraries are similar to system software libraries in that they are a repository

of classes" and page 1, lines 25-26 "One type of block supported by such tools is an n-

dimensional interpolation block that performs an index search operation and

interpolated table lookup"); and instantiating the index search block to create the first

block and instantiating the interpolation block to create the second block (Applicant's

specification, page 1, lines 13-14 "When a graphical class is used in a model, it is said

to be instantiated, i.e., an instance of the graphical class is created for use in the model")

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of maintaining in a block library and instantiating the index search block as taught in admitted prior art into the method of block diagram data processing as taught in the combination system by Kodosky and Chang. The modification would be obvious because of one of ordinary skill in the art would be motivated to maintain a block library and instantiating the index search block to provide efficiently perform the system.

Per claim 9:

The rejection of claim 8 is incorporated, and further, neither Kodosky nor Chang disclose receiving parameters from a user to instantiate the pre-lookup index search block and the interpolation block.

However, admitted prior art discloses receiving parameters from a user to instantiate the pre-lookup index search block and the interpolation block (Applicant's specification, page 1, lines 16-17 "Parameters are class member data that are specified when a user constructs a new instance of a class").

The feature of receiving parameter from user to instantiate would be obvious for the reasons set forth in the rejection of claim 8.

Per claims 10 and 13:

The rejection of claim 9 is incorporated, and further, neither Kodosky nor Chang

disclose receiving comprises providing the user with a dialog box having fields for

specifying values of the parameters for the pre-lookup index search block.

However, admitted prior art discloses receiving comprises providing the user with

a dialog box having fields for specifying values of the parameters for the pre-lookup

index search block (Applicant's specification, page 1, lines 18-20 "On a graphical user

interface (or "GUI"), such parameter specification interfaces take the form of a dialog

box with various parameter entry fields").

The feature of receiving parameter from user via dialog box would be obvious for

the reasons set forth in the rejection of claim 8.

Per claim 11:

The rejection of claim 9 is incorporated, and further, neither Kodosky nor admitted prior

art disclose receiving comprises providing the user with a textual API for

programmatically specifying values of the parameters.

However, Chang discloses in an analogous computer system receiving

comprises providing the user with a textual API for programmatically specifying values

of the parameters (col. 8, lines 36-39 "To accomplish this object manipulation through

data store access, the Smart Access graphical user interface 310 calls an object-

oriented application programing interface (API), Object Call Level Interface, OCLI,

320").

The feature of using API to specify parameter value would be obvious for the reasons set forth in the rejection of claim 8.

Per claim 12:

The rejection of claim 9 is incorporated, and further, neither Kodosky nor Chang disclose the parameters for the pre-lookup index search block comprise breakpoint data.

However, admitted prior art discloses wherein the parameters for the pre-lookup index search block comprise breakpoint data (Applicant's specification, page 1, line 27 "breakpoint data sets have to perform identical index search operations").

The feature of search block comprise breakpoint data would be obvious for the reasons set forth in the rejection of claim 8.

Per claim 16:

The rejection of claims 1 is incorporated, and further, Kodosky disclose:

- using the graphical block diagram of the graphical block diagram model as a specification for interpretation by automatic code generation software that generates code to perform computations equivalent to computations performed by the graphical block diagram model (col. 35, lines 57-67 section, Code Generation "Once the data store schema is mapped to the object schema, the user may use code generators 410 or 420 to generate data access methods for each object interface... the user may have created classes MyEmp and MyDept,

created tables EMP and DEPT, and mapped MyEmp to EMP and MyDept to

DEPT..." also fig. 5 and related discussion).

Per claim 19, 28:

Neither Kodosky nor Chang disclose maintaining in a block library an index search

block and an interpolation block that uses output of one or more pre-lookup index

search blocks; and enabling a user to use the pre-lookup index search and

interpolation blocks to build a graphical block diagram model.

However, admitted prior art discloses maintaining in a block library an index

search block and an interpolation block that uses output of one or more pre-lookup

index search blocks (Applicant's specification, page 1, lines 10-12 "Such blocks may

be placed in a reference library to define a graphical class. Graphical libraries are

similar to system software libraries in that they are a repository of classes" and page 1,

lines 25-26 "One type of block supported by such tools is an n-dimensional

interpolation block that performs an index search operation and interpolated table

lookup"); and enabling a user to use the pre-lookup index search and interpolation

blocks to build a graphical block diagram model (Applicant's specification, page 1, lines

13-14 "When a graphical class is used in a model, it is said to be instantiated, i.e., an

instance of the graphical class is created for use in the model").

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the method of maintaining in a block

library and instantiating the index search block as taught in admitted prior art into the

method of block diagram data processing as taught in the combination system by

Kodosky and Chang. The modification would be obvious because of one of ordinary skill

in the art would be motivated to maintain a block library and instantiating the index

search block to provide efficiently perform the system.

Claim 20 and 29 are the computer program product claim corresponding to method

claim 1 and rejected under the same rational set forth in connection with the rejection of

claim 1 above.

Claim 21, 24, and 30 are the system claim corresponding to method claim 1 and

rejected under the same rational set forth in connection with the rejection of claim 1

above.

11.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kodosky

in view of Change and further in view of US Patent No. 5,481,741 to McKaskle et al.

(hereinafter called McKaskle).

Per claim 15:

The rejection of claim 6 is incorporated, and further, neither Kodosky nor Chang

explicitly disclose wherein the generated information comprises a breakpoint data set

index value and a distance fraction value for each dimension and corresponding input

value chosen by the user.

However, McKaskle discloses in an analogous computer system wherein the

generated information comprises a breakpoint data set (col. 33, lines 49-52 "A

"breakpoint" may be set so that a reserved VI enters its "suspended" state when it is about to execute") index value and a distance fraction value for each dimension (col. 62, lines 59-63 "The top input being the actual array, and the bottom input, which receives a 1, being the index where the array is split. The output of this function is two, separate, one dimensional arrays") and corresponding input value chosen by the user (Abstract "A system and method for providing attribute nodes in a data flow diagram which allow a user to programmatically access various parameters of a control or indicator").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having breakpoint data set index value and a distance fraction value for each dimension and corresponding input value chosen by the user as taught in McKaskle into the method of block diagram data processing as taught in the combination system by Kodosky, Chang, and admitted prior art. The modification would be obvious because of one of ordinary skill in the art would be motivated to having breakpoint data index value chosen by user to provide enhance technique to user to programmatically control the appearance of the from panel during the execution as taught by McKaskle (col. 5, lines 35-45).

12.   Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodosky in view of admitted prior art and further in view of McKaskle.

Per claim 17:

Kodosky discloses:

- A method of graphical block diagram processing (col. 3, lines 50-51 "The present
  invention provides a system for modelling a process" and col. 3, line 54 "an editor
  for displaying at least one diagram"), comprising;
- receiving as an input a block diagram model that includes interpolation lookup
  blocks which each perform index search operations and interpolated table lookup
  (col. 3, lines 61-63 "an execution subsystem for assigning respective values for
  the one or more input variables");

Kodosky does not explicitly disclose detecting if the interpolation lookup blocks have
shared input values and breakpoint data sets.

However, McKaskle discloses in an analogous computer system detecting if the
interpolation lookup blocks have shared input values and breakpoint data sets (col. 33,
lines 49-52 "A "breakpoint" may be set so that a reserved VI enters its "suspended"
state when it is about to execute"). It is interpreted that values must be shared with
breakpoint data sets.

Therefore, it would have been obvious to a person of ordinary skill in the art at
the time the invention was made to incorporate the method of having breakpoint data
set shared by lookup blocks as taught in McKaskle into the method of block diagram
data processing as taught in the by Kodosky. The modification would be obvious
because of one of ordinary skill in the art would be motivated to having breakpoint data
index value shared to provide enhance technique to user to programmatically control

the appearance of the from panel during the execution as taught by McKaskle (col. 5,

lines 35-45).

Kodosky does not explicitly disclose the interpolation lookup blocks are

connected to at least one index search block which performs index search operations,

the index search block providing an input value and breakpoint data set to any

connected interpolation lookup block; interpreting the block diagram model as if the

block diagram model included separate index search blocks and interpolated lookup

blocks.

However, admitted prior art discloses the interpolation lookup blocks are

connected to at least one index search block which performs index search operations,

the index search block providing an input value and breakpoint data set to any

connected interpolation lookup block (Applicant's specification, page 1, lines 10-12

"Such blocks may be placed in a reference library to define a graphical class. Graphical

libraries are similar to system software libraries in that they are a repository of classes"

and page 1, lines 25-26 "One type of block supported by such tools is an n-dimensional

interpolation block that performs an index search operation and interpolated table

lookup" and (Applicant's specification, page 1, lines 13-14 "When a graphical class is

used in a model, it is said to be instantiated, i.e., an instance of the graphical class is

created for use in the model"); interpreting the block diagram model as if the block

diagram model included separate index search blocks and interpolated lookup blocks

(Applicant's specification, page 1, lines 10-12 "Such blocks may be placed in a

reference library to define a graphical class. Graphical libraries are similar to system software libraries in that they are a repository of classes" and page 1, lines 25-26 "One type of block supported by such tools is an n-dimensional interpolation block that performs an index search operation and interpolated table lookup").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of interpreting the block diagram model as if the block diagram model included separate index search blocks and interpolated lookup blocks as taught in admitted prior art into the method of block diagram data processing as taught in the combination system by Kodosky and McKaskle. The modification would be obvious because of one of ordinary skill in the art would be motivated to interpreting a block diagram and instantiating the index search block to provide efficiently perform the system.

Per claim 18:

The rejection of claim 17 is incorporated, and further, Kodosky disclose:

- using the interpreted graphical block diagram by automatic code generation software that generates code to perform computations equivalent to computations performed by the graphical block diagram model (col. 35, lines 57-67 section, Code Generation "Once the data store schema is mapped to the object schema, the user may use code generators 410 or 420 to generate data access methods for each object interface... the user may have created classes

MyEmp and MyDept, created tables EMP and DEPT, and mapped MyEmp to

EMP and MyDept to DEPT..." also fig. 5 and related discussion).

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Satish S. Rampuria** whose telephone number is **(571)**

272-3732. The examiner can normally be reached on **8:30 am to 5:00 pm** Monday to

Friday except every other Friday and federal holidays. Any inquiry of a general nature or

relating to the status of this application should be directed to the **TC 2100 Group**

receptionist: 571-272-2100.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Wei Y. Zhen** can be reached on **(571) 272-3708.** The fax phone number for

the organization where this application or proceeding is assigned is **571-273-8300.**

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

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more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Satish S. Rampuria
Patent Examiner/Software Engineer
Art Unit 2191

WEI ZHEN
SUPERVISORY PATENT EXAMINER